

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Original) A method for constituting a layered cell, which is for constituting a cell in an OFDMA (Orthogonal Frequency Division Multiple Access) mobile communication system, the method comprising:

- (a) dividing L carriers having orthogonality into M sub-channels;
- (b) dividing the carriers into N groups each having the M sub-channels;
- (c) grouping the N groups by an arbitrary integer into K classes; and
- (d) constituting a plurality of layered cells corresponding to the K classes.

2. (Original) A method for constituting a layered cell, which is for constituting a cell in an OFDMA mobile communication system, the method comprising:

- (a) dividing L carriers having orthogonality into M sub-channels;
- (b) dividing the carriers into N groups each having the M sub-channels;
- (c) grouping the N groups by an arbitrary integer into K classes; and
- (d) constituting a plurality of layered cells corresponding to the K classes.

3. (Currently Amended) The method as claimed in claim 1~~claim 1 or 2~~, wherein in the step (c), the respective K classes include the same or a different number of groups.

4. (Original) The method as claimed in claim 3, wherein the step (c) comprises: sequentially allocating the groups to each of the K classes, and allocating the $(nK+k)$ -th group to

the k-th class, when the respective K classes include the same number of groups.

5. (Original) The method as claimed in claim 3, wherein the step (c) comprises: arbitrarily allocating the respective N groups to each of the classes, when the respective K classes include a different number of groups.

6. (Currently Amended) The method as claimed in claim 1~~claim 1 or 2~~, wherein the plural layered cells of the step (d) includes sector layers comprising a plurality of sectors classified by wireless areas, and a cell layer comprising a single cell corresponding to an overall cell area.

7. (Original) The method as claimed in claim 6, wherein the step (d) comprises:
(d-1) allocating a capacity by sectors classified by wireless areas to map the classes to capacity;

(d-2) generating the classes by as many as the number of sectors; and

(d-3) allocating each class by sectors to constitute the sectors.

8. (Original) The method as claimed in claim 6, wherein the step (d) comprises:
(d-1) grouping the classes in a number of the sectors plus one;
(d-2) allocating each class to a sector area; and
(d-3) allocating the remaining class to a cell including the cell area.

9. (Original) The method as claimed in claim 6, wherein the step (d) comprises:

(d-1) grouping the N groups into two classes;

(d-2) allocating one class to the sector layers to allocate wireless resources for the classes equal in number to the sectors; and

(d-3) allocating the other class to the cell layer.

10. (Original) The method as claimed in claim 9, wherein the step (d-2) comprises: using a channel encoding technique and a forward error compensation method for data transmission when a collision occurs at a boundary of the sectors.

11. (Original) The method as claimed in claim 9, wherein the step (d-3) comprises: allocating wireless resources equally throughout the area of the cell layer to constitute a layered cell structure.

12. (Original) The method as claimed in claim 6, wherein the sector layers allow a use of wireless resources for a user having a low movement speed, the cell layer allowing a use of wireless resources for a user having a high movement speed.

13. (Original) The method as claimed in claim 6, wherein the sector layers allow a use of wireless resources for a service having a low priority, the cell layer allowing a use of wireless resources for a service having a high priority.

14. (Original) The method as claimed in claim 6, wherein the sector layers allocate

resources of the cell layer to a user requiring a high data rate in the vicinity of a sector boundary to allow a selection of AMC (Adaptive Modulation Coding) for high-speed data transmission.